

Appl. No. 10/815,468  
Amdt. dated July 20, 2006  
Amendment under 37 CFR 1.116 Expedited Procedure  
Examining Group 1641

PATENT

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Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1           1 (currently amended): A microarray comprising a support having a plurality of  
2 discrete regions having a biopolymer spotted thereon, wherein chemoselectively attached-to said  
3 biopolymer in each of said regions is a ligand that can be the same or different from a ligand in  
4 any other of said discrete regions, and wherein the concentration of said ligand in said discrete  
5 regions is substantially normalized-varies less than 50%.

1           2 (original): The microarray of claim 1, wherein said support is selected from the  
2 group consisting of glass, polystyrene, PVDF membranes, nylon membranes, and polycarbonate  
3 slides.

1           3 (original): The microarray of claim 1, wherein said biopolymer is a member  
2 selected from the group consisting of oligosaccharides, proteins, polyketides, peptoids,  
3 hydrogels, polylactates and polyurethanes.

1           4 (original): The microarray of claim 1, wherein said biopolymer is attached to  
2 said support via noncovalent interactions.

1           5 (original): The microarray of claim 4, wherein said noncovalent interactions  
2 are selected from the group consisting of hydrogen bonding, van der Waals interactions,  
3 hydrophobic interactions, hydrophilic interactions and combinations thereof.

1           6 (original): The microarray of claim 1, wherein said biopolymer is attached to  
2 said support via covalent interactions.

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1           7 (original): The microarray of claim 1, wherein said ligand is selected from the  
2 group consisting of amino acids, peptides, proteins, sugars, lipids, nucleic acids, small organic  
3 compounds, pharmaceutical agents, candidate pharmaceutical agents, natural or synthetic  
4 antigens, and combinations thereof.

1           8 (canceled): ~~The microarray of claim 1, wherein said ligand is attached to  
2 said biopolymer via chemoselective ligation.~~

1           9 (original): The microarray of claim 1, wherein said biopolymer is agarose, and  
2 said support is glass.

1           10 (withdrawn): The microarray of claim 1, wherein said biopolymer is human  
2 serum albumin, and said support is polystyrene.

1           11 (canceled): ~~The microarray of claim 1, wherein the concentration in said  
2 discrete regions varies less than 50%.~~

1           12 (previously presented): The microarray of claim 1, wherein the concentration  
2 in said discrete regions varies less than 20%.

1           13 (previously presented): The microarray of claim 1, wherein the concentration  
2 in said discrete regions varies less than 5%.

1           14 (withdrawn): A method of producing a concentration-normalized ligand  
2 array, said method comprising:

3           (a) forming a ligand-modified biopolymer by attaching a ligand to a  
4 functionalized biopolymer via chemoselective ligation; and  
5           (b) spotting an aliquot of said modified biopolymer mixture onto each of a  
6 plurality of discrete regions on a solid support to produce a concentration-normalized ligand  
7 array.

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1                   15 (withdrawn): The method of claim 14, wherein said method further  
2                   comprises, prior to step (b), the following step:  
3                   (a)(i) combining said ligand-modified biopolymer with a biopolymer solution to  
4                   form a modified biopolymer mixture.

1                   16 (withdrawn): The method of claim 14, wherein said solid support is selected  
2                   from the group consisting of glass, polystyrene, PDVF membranes, nylon membranes, and  
3                   polycarbonate slides.

1                   17 (withdrawn): The method of claim 14, wherein said aliquot is spotted onto  
2                   said solid support under conditions sufficient to form a gel-coated surface.

1                   18 (withdrawn): The method of claim 14, wherein said biopolymer is a member  
2                   selected from the group consisting of oligosaccharides, proteins, polyketides, peptoids,  
3                   hydrogels, polylactates and polyurethanes.

1                   19 (withdrawn): The method of claim 14, wherein said ligand is selected from  
2                   the group consisting of amino acids, peptides, proteins, sugars, lipids, nucleic acids, small  
3                   organic compounds, pharmaceutical agents, candidate pharmaceutical agents and combinations  
4                   thereof.

1                   20 (withdrawn): The method of claim 14, wherein said ligand-modified  
2                   biopolymer is peptide-modified agarose and said solid support is glass.

1                   21 (withdrawn): The method of claim 14, wherein said ligand-modified  
2                   biopolymer is peptide-modified human serum albumin and said solid support is polystyrene.

1                   22 (withdrawn): A method for promoting cell or tissue growth at a desired site,  
2                   said method comprising contacting said site with a ligand-modified biopolymer in an amount  
3                   effective to promote cellular chemotaxis and cell or tissue growth at said site, wherein said  
4                   biopolymer component is a member selected from the group consisting of agarose, polylysine

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5 and polyacrylamide, wherein said ligand component is a chemotactic peptide specific for a cell  
6 surface receptor, and wherein said ligand component is attached to said biopolymer component  
7 via chemoselective ligation.

1                   23 (withdrawn): The method of claim 22, wherein said biopolymer is agarose.

1                   24 (withdrawn): The method of claim 22, wherein said site is a member selected  
2 from the group consisting of a stent, a graft, an organ, a tissue and an implant.

1                   25 (withdrawn): The method of claim 22, wherein said cell or tissue growth  
2 occurs *in vivo*.

1                   26 (withdrawn): The method of claim 22, wherein said cell or tissue growth  
2 occurs *in vitro*.

1                   27 (withdrawn): A method for assaying the binding of ligands to a binding  
2 partner, said method comprising  
3                   (a) contacting a binding partner with a microarray of claim 1; and  
4                   (b) determining the amount of binding that occurs between said binding partner  
5 and the ligands present in the discrete regions of said microarray.

1                   28 (withdrawn): The method of claim 27, wherein said microarray comprises a  
2 modified agarose biopolymer.

1                   29 (currently amended): A microarray comprising a support having a plurality of  
2 discrete regions having a preformed ligand-modified biopolymer spotted thereon, wherein the  
3 ligand can be the same or different from a ligand in any other of said discrete regions, and  
4 wherein the concentration of said ligand in said discrete regions varies less than 50% is  
5 substantially normalized.

1                   30 (currently amended): A microarray comprising a support having a plurality of  
2 discrete regions made by

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